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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/248,515	02/08/1999	HOWARD B. SOSIN	2001611-0004	8867

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ART UNIT	PAPER NUMBER
3711	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/248,515	Applicant(s) SOSIN, HOWARD B.
	Examiner Stephen L. Blau	Art Unit 3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 January 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,11-13,24 and 29-60* is/are pending in the application.

4a) Of the above claim(s) *4,11,13,24 and 39* is/are withdrawn from consideration.

5)☒ Claim(s) *12* is/are allowed.

6)☒ Claim(s) *29-38 and 41-60* is/are rejected.

7)☒ Claim(s) *40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC ' 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The argument with respect to the rejection under 35 U.S.C. 112, second paragraph, for claims 29-38 and 40-49 is agreed with and the rejections are removed.

Claim Rejections - 35 USC ' 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 44-46 and 51-53 stand rejected under 35 U.S.C. 102(b) as being anticipated by Muldoon.

Muldoon discloses a method of constructing a designed golf club having a lean angle, design loft, length, lie and offset (Figs. 3-4) for a golfer comprising the steps of selecting a desired effective loft (desired designed loft) to be achieved in the form of

selecting a specific club (i.e. six iron (Col. 1, Lns. 48-52), determining an achieved effective loft in the form of using a specific club (i.e. six iron, Col. 1, Lns. 51-58), based on the determined achieved effective loft select a relationship between lean angle and design loft so that as a test club was swung the desired loft is achieved in the form of personalizing the loft to meet the particular habits of the individual golfer (Col. 1, Lns. 57-60), choosing a non-zero lean angle when the head rests on its sole for the designed club having a selected relationship to design loft, length, lie, and offset (Fig. 4), constructing a club having the chosen non-zero lean angle in the form of bending (Col. 3, Lns. 8-9), a designed club and a test club having substantially the same design loft, length, lie and offset in the form of the test club becoming the designed club after the loft angle is bend, a test club having a zero lean angle (Fig. 4), a club having a lean angle of 6 degrees (Fig. 4), and a connection being substantially parallel to a shaft in the form of a hosel being bent and as such will parallel and direct the direction of the shaft (Fig. 9). Clearly figure 4 has a club with a lean angle which this application is defining. Since this is not a method claim on how to hit a ball, how the shaft is held is not relevant. The patent of Muldoon probably does not intend for a golfer to use a club in figure 4 with the shaft not in a vertical position but clearly it could.

5. Claims 59-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Turner (Fig. 5), Knox (Fig. 3), Solheim (Fig. 1), Howard (Fig. 2), Taylor (Figs. 1-3), or Izett (Fig. 16, 26) .

Turner, Knox, Solheim, Howard, Taylor or Izett discloses a head and a hosel having a design loft such that if the sole of a head were positioned on a flat surface so that the face achieves the design loft with respect to a plane perpendicular to a flat surface, an angle drawn between a centerline of a shaft and a plane perpendicular to a flat surface is non-zero (See figures above).

Claim Rejections - 35 USC ' 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 29-32, 37-38, 41-43, 47-50, 54, and 55 stand rejected under 35 U.S.C. 103(a) as being unpatentable Muldoon over Ashcraft.

Muldoon discloses a method of constructing a designed golf club having a lean angle, design loft, length, lie and offset (Figs. 3-4) for a golfer comprising the steps of selecting a desired effective loft (desired designed loft) to be achieved in the form of selecting a specific club (i.e. six iron (Col. 1, Lns. 48-52), determining an achieved effective loft in the form of using a specific club (i.e. six iron, Col. 1, Lns. 51-58), based on the determined achieved effective loft select a relationship between lean angle and design loft so that as a test club was swung the desired loft is achieved in the form of

personalizing the loft to meet the particular habits of the individual golfer (Col. 1, Lns. 57-60), choosing a non-zero lean angle when the head rests on its sole for the designed club having a selected relationship to design loft, length, lie, and offset (Fig. 4), constructing a club having the chosen non-zero lean angle in the form of bending (Col. 3, Lns. 8-9), a designed club and a test club having substantially the same design loft, length, lie and offset in the form of the test club becoming the designed club after the loft angle is bend, a test club having a zero lean angle (Fig. 4), a club having a lean angle of 6 degrees (Fig. 4), a connection being substantially parallel to a shaft in the form of a hosel being bent and as such will parallel and direct the direction of the shaft (Fig. 9), a five iron and a six iron (Col. 1, Lns. 47-51) and a golfer having a stance and a grip (Col. 1, 54-56). Clearly figure 4 has a club with a lean angle which this application is defining. Since this is not a method claim on how to hit a ball, how the shaft is held is not relevant. The patent of Muldoon probably does not intend for a golfer to use a club in figure 4 with the shaft not in a vertical position but clearly it could.

Muldoon lacks constructing a club after a relationship is selected and a non-zero angle is chosen and a test club is swung, a head being forged at the time of manufacturing to achieve a non-zero lean angle, a center of mass of a club being substantially the same location as at the time of manufacture, correlating across a plurality of clubs a swing characteristic of an effective loft of a club for a golfer, matching across a plurality of clubs a swing characteristic of the location of the hands when the ball is addressed by a golfer, and relative difference between a design loft and the effective loft of each club is approximately zero. Clearly a golfer whose stance and grip

requiring one club in a set to be personalize will most likely require other clubs in a set to be personalize. In addition, an artisan skilled in the art of teaching golf would have selected a suitable location for the hands when the ball is addressed by a golfer for each club in a set in which matching the location of the hands when the ball is addressed for each club in a set is included. .

Ashcraft discloses a method of constructing a golf club using forging (Col. 3, Lns. 25-40). In view of the patent of Ashcraft it would have been obvious to modify the method of constructing a designed club of Muldoon to include constructing a club after a relationship is selected and a non-zero angle is chosen and a test club is swung in order to mass produce many heads for golfers needing the same correction, or to provide a golfer with more than one club with the same correction. In addition, it would have been obvious to have a method of forging in order to simplify the process of forming a head by removing a step of being a bending a hosel of a head.

It would have been obvious to modify the method of constructing a designed club of Muldoon to include a plurality of clubs in a set in order achieve the desired loft for all clubs in a set.

It would have been obvious to modify the method of constructing a designed set of clubs of Muldoon to have matching across a plurality of clubs a swing characteristic of the location of the hands when the ball is addressed by a golfer in order to simplify playing the game of golf by having only one stance and grip for each club in a set of clubs.

It would have been obvious to modify the method of constructing a designed club of Muldoon to have a relative difference between a design loft and the effective loft of each club is approximately zero for a golfer who has a stance in which the shaft is not held in a vertical orientation.

8. Claims 33-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Muldoon in view of Ashcraft as applied to claims 29-32, 37, 47-49, 54, and 55 above, and further in view of Schmoll.

Muldoon discloses determining an effective loft based upon a trajectory of a ball struck in the form of a golfer achieving a certain degree of loft when using a specific club (Col. 1, Lns. 51-59).

Muldoon lacks using an automated observing system, an image forming device, and slow motion capability. Schmoll discloses using an automated observing system (Col. 3, Lns. 33-66), an image forming device, and slow motion capability (Col. 4, Lns. 57-67) in form of a digital camera used to determine lie at impact which is than used in determining modifications made to a club during a tailoring process (Col. 5, Lns. 25-45) in order to have accuracy (Col. 2, Lns. 35-42). In view of the patent of Schmoll it would have been obvious to modify the method of constructing a club to include using an automated observing system, an image forming device, and slow motion capability of a digital camera to determine effective loft in order to ensure accuracy for the fitting process in adjusting the loft angle and lean angle.

9. Claims 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner in view of Scheie.

Turner discloses a method comprising steps of selecting a design loft, selecting a structure for a hosel such that a head is positioned on a flat surface achieves the design loft with respect to a plane perpendicular to the flat surface, the angle drawn between a centerline of a shaft and a plane perpendicular to the flat surface is non-zero (Fig. 5), a step of constructing a head and hosel of metal (Col. 5, Lns. 55-58), and a step of attaching a shaft to a hosel (Col. 4, Lns. 6-11).

Turner lacks a step of forging or casting. Scheie discloses a method of forming a golf club with a step of forging and casting (Col. 4, Lns. 1-2). In view of the patent of Scheie it would have been obvious to modify the method of forming a head of Turner to have a step of forging or casting in order to have a method of forming metal heads which is repeatable and consistent.

Allowable Subject Matter

10. Claim 12 is allowed. None of the prior art discloses or renders as obvious a method of constructing a plurality of clubs determining a lean angle based on locating a ball progressively backward in a golfer's stance, away from the target, for increasingly longer clubs.

11. Claim 40 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art discloses or renders as obvious a method of constructing a plurality of clubs determining a lean angle based on locating a ball progressively backward in a golfer's stance, away from the target, for increasingly longer clubs.

Response to Arguments

12. The argument that it is improper to use the reference of Muldoon since applicant's clubs are structurally different from all currently available clubs and Muldoon does not disclose properties of lean angles greater than 3 degrees, woods with non-zero lean angles, and clubs with non-zero lean angles where the hosel connecting the shaft and head is substantially parallel to the shaft is disagreed with. Muldoon along with the new art disclosed in paragraph 5 clearly show clubs structurally the same as the applicant's club. In addition, Muldoon (Fig. 4) shows a club with a lean angle greater than 3 degrees as dose Taylor. Turner, Taylor and Howard disclose woods with lean angles though none of the claims limited the club with a lean angle to only a wood type club. Finally it is disagreed that Muldoon does not disclose clubs with non-zero lean angles where the hosel connecting the shaft and head is substantially parallel to the shaft. Figure 9 clearly show a club after it has been bent having a hosel parallel to a shaft.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Paul Sewell whose telephone number is (703) 308-2126. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.

Slb 6 February 2002

Stephen Blau
Stephen Blau
examiner
Art Unit 3711